CLAIMS

1. A method to introduce an IP-subscriber connection in correspondence to an existing TDM connection between a subscriber A on an A-side of the TDM connection and a subscriber B on a B-side of the TDM connection, comprising the steps of:

sending a set up signal including IP connection information and a caller ID of the subscriber A to the B-side over the existing TDM connection;

inviting the A-side to set up an IP connection from the B-side including IP connection information and a caller ID of the subscriber B; and

establishing the IP-subscriber connection based on the IP connection information and caller ID from the subscriber A and the subscriber B.

2. The method according to claim 2, further comprising the step of transmitting an IP connect signal from the subscriber A to a call agent on the B side.

3. The method according to claim 2, further comprising the step of sending an IP connect signal from a B-side call agent to an A-side call agent.

4. The method according to claim 3, completing the IP-subscriber connection when an A-side call agent sends an IP connect signal to the subscriber A.

5. The method according to claim 1, further comprising the step of releasing the TDM connection while the IP-subscriber connection continues.

6. The method according to claim 1, further comprising the step of coupling a TDM call service through the IP-subscriber connection thereby establishing a TDM call service on the IP-subscriber connection.

7. A method to establish an IP-subscriber connection using an IP-concentrator and the routing fabric of an existing TDM switch between a subscriber A on an A-side of the TDM connection and a subscriber B on a B-side of the TDM connection, comprising the steps of:

translating an IP-call request from the subscriber A to a corresponding TDM call request; and

injecting the translated IP-call request into the TDM-switch by the IP-concentrator; and

establishing the IP-subscriber connection in response to the IP-call request injected into the TDM-switch.

8. The method according to claim 7, further comprising the step of injecting an IP-call invite signal from the B-side into a corresponding TDM-switch on the B-side.

9. The method according to claim 8, further comprising the step of transmitting the IP-call invite signal from the B-side TDM switch to the A-side via a corresponding TDM connection.

10. The method according to claim 7, further comprising the step of releasing a corresponding TDM connection of the IP-subscriber connection.

11. The method according to claim 7, further comprising the step of coupling a TDM call service through the IP-subscriber

connection thereby establishing a TDM call service on the IP-subscriber connection.

12. An apparatus to introduce an IP-subscriber connection in an existing TDM connection between a subscriber A on an A-side of the TDM connection and a subscriber B on a B-side of the TDM connection, comprising:

a TDM switch on the A-side coupled to the subscriber A;

an IP-concentrator A coupled to the TDM switch on the A-side; and

wherein, the TDM switch on the A-side forwards IP call information of the subscriber A to the B-side and, based on this information, the IP-concentrator A establishes the IP-subscriber connection.

13. The apparatus according to claim 12, further comprising:

a TDM switch on the B-side coupled to the subscriber B, wherein the TDM switch on the A-side forms the TDM connection to the TDM switch on the B-side; and

an IP-concentrator B coupled to the TDM switch on the B-side, wherein the IP-concentrator B receives the IP call information via the TDM switch on the B-side and forwards IP call information of the subscriber B to the A-side that is used to establish the IP-subscriber connection.

14. The apparatus according to claim 12 wherein the subscriber B is authenticated by the A-IPCON 102 to determine the IP nature of the subscriber B.

15. The apparatus of claim 12, wherein the IP-concentrator A interfaces the TDM switch in the A-side by an TR303.

16. The apparatus of claim 12, wherein the IP-concentrator A interfaces the TDM switch in the A-side by an ISDN interface.

17. A method for providing TDM call services on an IP-subscriber connection that corresponds to a previous TDM connection between a subscriber A on an A-side and a subscriber B on a B-side, at least the A-side including an IP-concentrator, the method comprising the steps of:

setting a trigger that causes a TDM switch on the A-side to pass control of an incoming call to the IP concentrator on the A-side; and

instructing the TDM switch to resume call processing of the incoming call when the trigger is triggered.

18. The method according to claim 17, wherein when the IP-concentrator finds its subscriber involved in an IP-call, then further comprising the step of the IP-concentrator reestablishing the TDM call.

19. The method according to claim 18, further comprising the step of verifying which IP-concentrator originated the call.

20. The method according to claim 18, instructing a TDM switch of the TDM connection via a TCAP message to resume the incoming call processing.

21. The method according to claim 17, wherein when the IP-concentrator finds its subscriber idle then further comprising the step of instructing by the IP-concentrator a TDM switch corresponding to the TDM connection to resume incoming call processing.

22. The method according to claim 17, wherein the trigger is an advanced intelligent network trigger.

23. The method according to claim 17, further comprising the step of providing a TDM call feature for the IP-subscriber connection via the re-established TDM connection.

24. A method for providing TDM call services on an IP-subscriber connection that corresponds to a previous TDM connection between a subscriber A on an A-side and a subscriber B on a B-side, at least the A-side including an IP-concentrator, the method comprising the steps of:

activating by the IP-concentrator a Call Forwarding feature for a particular subscriber when the IP-concentrator establishes an IP call for the particular subscriber; and

forwarding any incoming call for the particular subscriber to the IP-concentrator.

25. The method according to claim 24, further comprising the step of providing information of the particular subscriber service-subscription to the IP-concentrator.

26. A system for providing a TDM call service to an IP-subscriber connection corresponding to a previously placed TDM call, comprising:

an IP-concentrator coupled to a particular subscriber for establishing the IP-subscriber connection to another subscriber;

a TDM switch for coupling the particular subscriber via a TDM connection to the said another subscriber;

a trigger that triggers the TDM switch to point an incoming TDM call service to the IP-concentrator.

27. The system according to claim 26, wherein the IP concentrator includes an SCP for controlling incoming call traffic.

28. The system according to claim 26, further comprising a remote IP-concentrator coupled to said another subscriber that handles IP trafficking regarding said another subscriber.

29. The system according to claim 26, further comprising another TDM switch coupled to said another subscriber that handles TDM trafficking regarding said another subscriber.